

REMARKS

Claims 49-52 are canceled. Claim 42 is amended. No new matter is added as the originally-filed application supports the amendment language at, for example, Figs. 1-7. New claims 60-66 are added. Regarding new claims 60-61, no new matter is added as the originally-filed application supports the new claims at, for example, paragraphs 0020 and 0023. Regarding new claims 62-66, no new matter is added as the originally-filed application supports the new claims at, for example, Figs. 8-11. Claims 42-48 and 53-66 are pending in the application.

Claims 42-46, 49, 51, and 54-57 stand rejected under 35 U.S.C. §102(b) as being anticipated by Gambino et al. (6,081,021). Claims 47-48 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Gambino et al. in view of McCollum et al. (5,191,241) and further in view of Lowrey et al. (5,100,754). Claim 53 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Gambino et al. in view of Lowrey et al. Claims 50, 52 and 58 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Gambino et al. in view of Husher et al. (5,171,715). Claim 59 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Gambino et al. in view of Wu (6,087,677).

Regarding the rejection against claim 42 based on Gambino, such claim recites at least one of a first and a second electrical node has a lateral width defined by a pair of isolation regions formed within a semiconductor substrate on opposite sides of the at least one of the first and second electrical nodes. The art of record fails to teach or suggest a pair of isolation regions formed

within a semiconductor substrate. Accordingly, it is inconceivable that Gambino, singularly or in any combination, teaches or suggests a pair of isolation regions formed within a semiconductor substrate **on opposite sides of the at least one** of the first and second electrical nodes as positively recited in claim 42. Claim 42 is allowable.

Claims 43-48 and 53-61 depend from independent claim 42, and therefore, are allowable for the reasons discussed above with respect to the independent claim, as well as for their own recited features which are not taught or shown by the art of record.

For example, claim 48 stands rejected over Gambino in view of McCollum and Lowrey. The claim recites a first electrical node comprises an **n-type doped** diffusion region within a semiconductive material of a semiconductor substrate. Independent claim 42, from which claim 48 depends, recites the first electrical node, a dielectric material within a first opening, and a first conductive material plug **together being incorporated into an anti-fuse** construction. That is, the **n-type doped diffusion region is incorporated into an anti-fuse construction**. The Examiner correctly states Gambino does not teach such limitation and relies on McCollum and Lowrey for such a teaching (pgs. 3-4 of paper no. 03102004). However, McCollum teaches an antifuse 336 connecting a second layer metal segment 332 to a conductor 340 several elevational levels above source/drain regions 314 and 316 in substrate 310 (Fig. 3a; col. 6, lines 1-15). That is, McCollum **does not** teach a diffusion region is incorporated into an anti-fuse construction. Lowrey teaches a **p-type diffusion region is incorporated into an**

anti-fuse element 121 (Fig. 12), but not a n-type doped diffusion region. Consequently, Gambino, McCollum and Lowrey, singularly, do not teach or suggest a n-type doped diffusion region is **incorporated into an anti-fuse** construction. Therefore, it is inconceivable that any combination of Gambino, McCollum and Lowrey teach or suggest a first electrical node comprises an n-type doped diffusion region, a dielectric material within a first opening, and a first conductive material plug together being incorporated into an anti-fuse construction as positively recited by claim 48. Claim 48 is allowable.

Dependent claim 53 stands rejected by Gambino and Lowrey, and such claim recites conductive plugs comprise conductively doped silicon. The Examiner correctly states Gambino does not teach such limitation and relies on Lowrey for such a teaching (pg. 4 of paper no. 03102004). However, Lowrey fails to teach a conductive plug. Consequently, modifying the Gambino invention with the teachings of Lowrey would fail to teach or suggest conductive plugs comprise conductively doped silicon as positively recited in claim 53. Claim 53 is allowable.


Dependent claim 58 stands rejected by Gambino and Husher, and such claim recites conductive plugs comprise copper and aluminum. The Examiner correctly states Gambino does not teach such limitation and relies on Husher for such a teaching (pg. 5 of paper no. 03102004). However, Husher fails to teach a conductive plug. Consequently, modifying the Gambino invention with the teachings of Husher would fail to teach or suggest conductive plugs comprise copper and aluminum as positively recited in claim 58. Claim 58 is allowable.

Dependent claim 59 stands rejected by Gambino and Wu, and such claim recites conductive plugs comprise a layer of titanium nitride **against** a dielectric material and a mass of tungsten **over** the layer of titanium nitride. The Examiner correctly states Gambino does not teach such limitation and relies on Wu for such a teaching (pg. 5 of paper no. 03102004). However, Wu teaches electrodes can comprise layers of different materials without providing any teaching to a specific order of the respective different materials (col. 1, lines 40-55). Consequently, it is inconceivable that the combination of Gambino and Wu teach or suggest a layer of titanium nitride **against** a dielectric material and a mass of tungsten **over** the layer of titanium nitride as positively recited in claim 59. Claim 59 is allowable.

This application is now believed to be in immediate condition for allowance, and action to that end is respectfully requested. If the Examiner's next anticipated action is to be anything other than a Notice of Allowance, the undersigned respectfully requests a telephone interview prior to issuance of any such subsequent action.

Respectfully submitted,

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